

IN THE CLAIMS

Please amend claims 1-3, 9, 13, 14, 16, 18, 42, 47, and 48 as shown below, in which deletions are indicated by strikethrough and/or double brackets, and additions are indicated by underscoring. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A production method for a carbide sintered compact comprising the steps of:

forming a mixture of a solvent and carbide powder coated with high polymer organic substance that is substantially insoluble in the solvent;

producing a compact from said mixture; and

sintering the produced compact,

wherein the high polymer organic substance exhibits a function as a sintering aid of the carbide powder, and

wherein the porosity of the sintered compact is 10 volume % or less.

2. (Currently amended) A production method for a boron carbide sintered compact comprising the steps of:

coating boron carbide powder with a high polymer organic substance that is substantially insoluble in water;

mixing the coated boron carbide powder and water to form a slurry;

producing a compact from the slurry; and

sintering the produced compact,

wherein the ~~high~~ polymer organic substance exhibits a function as a sintering aid of the powder when sintered so as to control the grain growth of boron carbide, and a part of the sintering aid is taken into boron carbide crystals, and

wherein the porosity of the sintered compact is 10 volume % or less.

3. (Currently amended) A production method for a boron carbide sintered compact according to claim 2, wherein a volume fraction of the powder and the ~~high~~ polymer organic substance in the mixture is 1 - 40 parts by volume of the ~~high~~ polymer organic substance to 100 parts by volume of the boron carbide powder.

4. (Previously Proposed) A production method for a boron carbide sintered compact according to claim 2, wherein the slurry is poured into a porous mold to let the mold absorb a part of the water, thereby producing the compact.

5. (Canceled).

6. (Canceled).

7. (Previously Proposed) A method according to claim 2, wherein the produced compact is dried, and then the dried compact is sintered.

8. (Canceled).

9. (Currently amended) A method according to claim 2, wherein all or a part of said sintering step is performed in a non-oxidizing atmosphere, such that the ~~high~~ polymer organic substance is reformed to a substance which contains carbon from the ~~high~~ polymer organic substance as its main component, and the substance containing the carbon as its main component exhibits a function as a sintering aid of the powder.

10. (Canceled).

11. (Canceled).
12. (Withdrawn) A sintered powder compact obtained by the method according to claim 7.
13. (Withdrawn -Currently Amended) A sintered powder compact according to claim 12, wherein the sintered powder compact contains a reformed component from part or all of the carbon of the ~~high~~ polymer organic substance.
14. (Withdrawn -Currently Amended) A mixture of a solvent and a powder coated with a ~~high~~ polymer organic substance that is substantially insoluble in the solvent.
15. (Withdrawn) A mixture according to claim 14, wherein the powder comprises carbide powder.
16. (Withdrawn-Currently Amended) A powder coated with a ~~high~~ polymer organic substance for use in the mixture according to claim 14.
17. (Withdrawn) A sintered powder compact obtained by the production method according to claim 1.
18. (Currently amended) A production method for a boron carbide sintered compact according to claim 2, wherein the ~~high~~ polymer organic substance functions as a compacting aid for providing at least one of plasticity and strength to a compact or its precursor in the compacting step.
19. (Withdrawn) A sintered powder compact produced by the production method for a sintered powder compact according to claim 18.
20. (Previously Proposed) A production method for a boron carbide sintered compact according to claim 2 wherein the average particle size of boron carbide powder is $0.3\ \mu\text{m} \sim 1.4\ \mu\text{m}$.

21. (Withdrawn) A boron carbide sintered compact produced by the production method for a boron carbide sintered compact according to claim 20.
22. (Withdrawn) A mobile body device with a positioning function, wherein part or all of a movable section of the mobile body device comprises a sintered powder compact produced according to the method of claim 7.
23. (Withdrawn) A mobile body device according to claim 22, wherein a specific rigidity ratio of the sintered powder compact is 100 GPa or more.
24. (Withdrawn) A mobile body device according to claim 22, wherein the mobile body device is a hydrostatic fluid bearing device.
25. (Withdrawn) A mobile body device according to claim 24, wherein the hydrostatic fluid bearing device is used in a lithography device for forming a pattern on a tabular object.
26. (Withdrawn) A mobile body device according to claim 25, wherein the tabular object is one of a semiconductor wafer and a liquid crystal panel.
27. (Withdrawn) A mobile body device according to claim 22, wherein said part or all of the movable section has at least one of a hollow structure and a rib structure.
28. (Withdrawn) A mobile body device according to claim 27, wherein said at least one of the hollow structure and the rib structure is formed by arranging molds during slip casting.
29. (Withdrawn) A mobile body device according to claim 27, wherein said at least one of the hollow structure and the rib structure is formed by joining a plurality of said sintered powder compacts.
30. (Withdrawn) A mobile body device according to claim 27, wherein said at least one of the hollow structure and the rib structure is formed by soldering the sintered compact.

31. (Withdrawn) A mobile body device according to claim 27, wherein said at least one of the hollow structure and the rib structure is formed by processing the compact before sintering.
32. (Withdrawn) A hydrostatic fluid bearing device, wherein part or all of a movable section of the device is made of material having a specific rigidity ratio of 100 GPa or more, and part or all of the movable section has at least one of a hollow structure and a rib structure.
33. (Withdrawn) A protective member for absorbing shock from collision with a missile comprising a sintered powder compact produced according to the method of claim 7.
34. (Withdrawn) A protective member for absorbing shock from collision with a missile comprising a sintered powder compact made by slip casting and sintering of a ceramic powder.
35. (Withdrawn) A protective member for absorbing shock from collision with a missile according to claim 33, wherein the protective member further includes a backup material provided together with the sintered powder compact for absorbing shock from collision with the missile.
36. (Withdrawn) A protective member for absorbing shock from collision with a missile according to claim 33, further comprising at least one other material provided on opposite sides of the sintered powder compact in a sandwiched structure.
37. (Withdrawn) A device equipped with the protective member for absorbing shock from collision with a missile according to claim 33 on all or a part of a crust of the device.
38. (Withdrawn) A device according to claim 37, wherein all or part of the crust equipped with the protective member for absorbing shock from collision with a missile is obliquely provided to an estimated direction of collision with the missile.
39. (Withdrawn) A device equipped with a protective member with a curved structure for

absorbing shock from collision with a missile, comprising a ceramic sintered compact with a curved structure provided on all or part of a crust of the device.

40. (Canceled).

41. (Withdrawn) A mixture according to claim 15, wherein a main component of the solvent is water.

42. (Withdrawn-Currently Amended) A mixture according to claim 15, wherein a volume fraction of the powder and the high polymer organic substance in the mixture is 1 - 40 parts by volume of the high polymer organic substance to 100 parts by volume of the powder.

43. (Previously Proposed) The method according to claim 45, comprising a further step of performing HIP treatment on the sintered compact.

44. (Withdrawn) A device according to claim 39, wherein the protective member is provided obliquely to an estimated direction of collision with the missile.

45. (Previously Proposed) The method according to claim 7, wherein the sintering step is performed under atmospheric pressure and a non-oxidizing atmosphere.

46. (Previously Proposed) The method according to claim 1, wherein the production method is a wet method, and the mixture is a slurry.

47. (Currently Amended) ~~The method according to claim 1,~~ A production method for a carbide sintered compact comprising the steps of:

forming a mixture of a solvent and carbide powder coated with polymer organic substance that is substantially insoluble in the solvent;

producing a compact from said mixture; and

sintering the produced compact.

wherein the polymer organic substance exhibits a function as a sintering aid of the carbide powder,

wherein the porosity of the sintered compact is 10 volume % or less, and

wherein the ~~high~~ polymer organic substance is selected from the group consisting essentially of epoxy resin, polyurethane resin, diallyl phthalate resin, polyethylene resin, polycarbonate resin, fluorocarbon resin, polypropylene resin, urea resin, melamine resin, polyester resin, styrol resin, acrylic resin, polyacetal resin, polyvinyl acetate resin, phenol resin, furan resin, polyamide resin, vinyl chloride resin, cellulose resin, and saccharides.

48. (Currently Amended) ~~The method according to claim 2,~~ A production method for a boron carbide sintered compact comprising the steps of:

coating boron carbide powder with a polymer organic substance that is substantially insoluble in water;

mixing the coated boron carbide powder and water to form a slurry;

producing a compact from the slurry; and

sintering the produced compact,

wherein the polymer organic substance exhibits a function as a sintering aid of the powder when sintered so as to control the grain growth of boron carbide, and a part of the sintering aid is taken into boron carbide crystals,

wherein the porosity of the sintered compact is 10 volume % or less, and

wherein the ~~high~~ polymer organic substance is selected from the group consisting essentially of epoxy resin, polyurethane resin, diallyl phthalate resin, polyethylene resin, polycarbonate resin, fluorocarbon resin, polypropylene resin, urea resin, melamine resin, polyester resin, styrol resin,

acrylic resin, polyacetal resin, polyvinyl acetate resin, phenol resin, furan resin, polyamide resin,
vinyl chloride resin, cellulose resin, and saccharides.